

ON SOME CYPRAEIDAE IN THE COLLECTION OF MR. D. W. FERGUSON,  
OF BROOKLYN, WITH DESCRIPTIONS OF SEVERAL NEW VARIETIES.

BY SLOMAN ROUS.

In this collection—which Mr. Ferguson kindly allowed me to inspect—the Cypraeidæ are especially interesting. There are several varieties that appear to me to have been not hitherto noticed, and some which, though not attaining varietal dignity, are well worthy of remark.

## CYPRAEA HELVOLA var. APHRODITE, var. nov.

More pyriform and much wider than the type, and considerably depressed. Very pale yellowish-brown, sides slightly darker, again changing to the paler dorsal color on the base, the interstices of the teeth a full shade darker, back flecked with numerous small snow-white spots, and a few larger spots of a still pale brown, but darker than the ground color. Edges of base rather heavily thickened.

I am not sure that this shell may not claim specific rank, while it is close to *C. helvola*, the differences are many. Beside its pyriform shape the outer half of the base is about two and a half times wider between the aperture and outer edge than the opposite, and the teeth are prolonged almost half-way over this space, making them appear finer and more elegant than in *helvola*. The aperture is almost straight and narrower than the type. This is accentuated by the columellar lip being much less arcuated than is normally the case, so that the anterior portion of the lips are almost as close together as the posterior. Long. 27, lat. 20, alt. 14 mm. It is a very lovely shell and undoubtedly very rare. Hab. Sandwich Is., W. I. Pease.

A specimen of *C. arabica* is curiously marked. On the inner side of the dorsal line the pattern is normal, but on the outer side, while some of the white spots are irregular in shape, most of them are round and annulated with dark brown. The dorsal line is very crooked and would seem to indicate a malformation of the mantle.

There is also a specimen of *arabica* var. *eglantina* Duclou. Mr. J. Cosmo Melvill, in his description of this shell in his "Survey of the Genus Cypraea," says it is shining brown. All the specimens I have seen have been the color of Portland cement, and decidedly not brown.

## CYPRAEA EXANTHEMA var. PUDICA, var. nov.

Shape normal, small, color very pale brown, with spots of gray-

white, minutely—almost microscopically—thickly irrorated all over with dots of still lighter color than the spots, and showing on them as well as the rest of the shell, thickly, minutely granulated at the extremities, and less thickly so over dorsal surface, sides smooth. Long. 55, lat. 36 mm.

Notwithstanding the dull coloring and that the granulation detracts somewhat from the lustre of the shell, it is still a very pretty and striking addition to the handsome suite of exanthema in the collection.

A dwarf *C. cervinetta* is a very pretty little shell of a dark umber-brown, with whitish spots and dorsal line down the centre of the back, base fawn color with faint brownish blotch and bright chocolate-brown teeth. Long. 31, lat. 17, alt. 13.5 mm.

In the suite of *C. lynx* is a very interesting example. It is longitudinally corrugated from one side to the other by lines of growth. The earlier lines are narrow, numerous striations running from the spire obliquely to the base in which they disappear; on the back they are parallel to the sides, only bending near the anterior extremity; on the outer side they become parallel to the edge of the base. From the earliest to the latest stage of growth the intervals between the striae gradually and regularly increase in width until those on the outer side are shallow sulci between sharp costulae, the width of the last sulcus being 3 mm. It is a young shell, probably waiting its last deposit of enamel, which would very likely obliterate the growth lines; as it is, it is a very beautiful illustration of shell-formation.

Another specimen of *lynx* is interesting for its size; it is adult, normal in every respect, except size. Long. 21, lat. 11.5 mm.

#### CYPRÆA VITELLUS var. FERGUSONI, var. nov.

Teeth, base and sides normal, dorsal line wide, lighter in color than the back, dorsal surface rather dark fulvous brown, obscurely banded with lighter shade and spotted with bluish-white or light lead-colored spots, which seem to solve themselves into rows of three or four in various directions, each spot surrounded by a narrow blackish ring; the spots at sides are not annulated. Long. 37, lat. 23, alt. 19 mm.

The difference between this and the type lies in the annulation of the spots and their disposition in short rows. It is fully developed though small in size. Loc. ?

## CYPRÆA CRUENTA var. VIOLACEA, var. nov.

There are two specimens of *cruenta*, one typical in shape, the other stunted, broader, somewhat depressed, with the strong teeth of var. *coloba* Melvill, but each having a large, bright violet patch on the base. The brownish-violet spots on the sides are also unusually bright. I propose the above name for such specimens as possess the violet basal blotch.

## CYPRÆA CAPUT-SERPENTIS var.

Base and sides normal, back almost pure white but very faintly tinged with blackish on which the snow-white spots are just perceptible, the brown of the sides merging a little into the white of the dorsum, showing a narrow border of the typical white spots; extremities of the usual smoky white. The white back accentuated by the dark sides is curiously suggestive of a bald head.

Another specimen of *caput-serpentis* has the dorsal surface a lighter brown than the sides, and sparsely spotted and blotched with whitish-brown.

There is also a dwarf specimen: Long. 20, lat. 13, alt. 10 mm.

## CYPRÆA CAURICA var.

Back light yellowish-brown with three brown bands, rather profusely sprinkled with small brown spots. Base and sides creamy white, striated with fine pure white lines. Sides with a few large dark-brown purplish-shaded spots.

## CYPRÆA ISABELLA var. FULVA, var. nov.

Uniform yellowish-brown, only very faintly tinged with orange at the extremities, base creamy-white.

Length  $30\frac{1}{2}$ , diam. 16 mm. (Coll. Ferguson.)

Length 35, diam. 19 mm. (Coll. Acad. Nat. Sci.)

There is another specimen of *isabella* the same color but with the normal longitudinal black markings and orange extremities.

## CYPRÆA CARNEOLA var. ADONIS, var. nov.

Base pure white, extending a little up the sides, above which the sides are light yellowish-brown, thickly irrorated with minute white spots. Dorsum whitish, banded with four faint orange bands. Sides thickened. Teeth yellow, turning to orange anteriorly. More pyriform in shape than typical *carneola*.

There is a diversity of opinion respecting this shell among our

local collectors, some considering it a variety of *C. arenosa*, and others *C. carneola* var. *propinqua* Garrett. I think it is closer to *carneola* than *arenosa*, but it differs from *propinqua* in having no violet ring and in the color of the teeth.

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SHELL COLLECTING ON THE MOSQUITO COAST OF NICARAGUA.—V.

BY W. H. FLUCK.

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*Liotia cruentata* Mühlf.

*Omphalius viridulus* Gmel.

*Omphalius indusii* Ch.

*Livona pica* Linn.

All from Man of War Keys. The last-named species is found by the dory-load, and is used as an article of food by the natives. When perfect, the shell is beautifully mottled with white and black, but most specimens from "the keys" are badly incrustated. The beautiful spiral operculum is a study in itself.

*Fissuridea alternata* Say. Wounta Haulover. I found about a dozen in four years, the locality being, I suppose, not rocky enough for them.

*Subemarginula octoradiata* Gmel. Man of War Keys.

*Acmæa melanoleuca* Gmel. King's Keys. A white variety.

*Guppya biolleyi* Mart. Rama Key. This little island is in the Bluefields lagoon, about 10 miles south of the town of Bluefields. The shell was found in the yard of the Moravian Mission.

*Epiphragmothora coactiliata* Fér. Weilawas Hill, near Wani, Nicaragua, near where the Ulli river and Wani river meet to form the Prinzapolka river.

*Bulinulus corneus* Sowb. Bluefields, in the garden of the Moravian Mission, among flags and other plants and under stones.

*Macroceramus caracasensis* Rve. Bluefields. Same locality and station.

*Macroceramus concisus* Morelet. Weilawas Hill, Wani, Nic.

*Bifidaria* sp.? Bluefields. Numerous. Clinging to stones. Dr. Dall has seen specimens, and says they much resemble *B. cyriesii* Drouet, of Venezuela, or *P. wolffi* Miller, of Ecuador, adding: "There are so many of these described that I don't dare attempt to name it, especially as our series of these species from the tropics is very incomplete."